

Claims

1. A composite material for forming a liquid-retaining layer in a hygiene article or a medical product, (having) a first layer of substantially continuous staple fibers with a diameter of 15 to 35 μm , and (having) a second film layer, characterized in that to form a three-layer composite material, a third layer (6) of microfibers with a diameter of less than 10 μm is provided on the full surface of the side of the staple fiber layer (4) remote from the film layer (2), and this third microfiber layer (6) three-dimensionally penetrates the surface structure of the staple fiber layer (4) in such a way that the mean spacing D' between the microfiber layer (6) and the film layer (2) is less than the thickness D_{sp} of the staple fiber layer (4) sandwiched in between.

2. The composite material of claim 1, characterized in that the retention or adhesion force of a hook material relative to the outside of the composite material, formed by the microfiber layer (6), is less than 20 cN/25 mm, preferably less than 10 cN/25 mm, and especially preferably less than 5 cN/25 mm.

a 3. The composite material of claim 1 or 2, characterized in that the film layer (2) also penetrates the three-dimensional surface structure of the staple fiber layer (4).

428/219 4. The composite material of one of the foregoing claims, characterized in that the weight per unit of surface area of the composite material is 20 to 45 g/m², and

preferably 25 to 40 g/m².

a 5. The composite material of ~~one of the foregoing~~ claims, characterized in that the weight per unit of surface area of the composite material is 30 to 35 g/m².

a 6. The composite material of ~~one of the foregoing~~ claims, characterized in that the weight per unit of surface area of the microfiber layer (6) is 3 to 10 g/m², and preferably 4 to 6 g/m².

a 7. The composite material of ~~one of the foregoing~~ claims, characterized in that the weight per unit of surface area of the staple fiber layer (4) is 15 to 25 g/m², and preferably, 18 to 22 g/m².

a 8. The composite material of ~~one of the foregoing~~ claims, characterized in that the thickness of the film layer (2) is 9 to 20 μm and preferably 12 to 17 μm.

a 9. The composite material of ~~one of the foregoing~~ claims, characterized in that the tear strength of the composite material is at least 15 N/25 mm, and preferably at least 18 N/25 mm.

10. The composite material of ~~one of the foregoing~~ claims, characterized in that the film layer (2) is breathable but liquid-proof, so that the composite material is likewise breathable but liquid-proof.

11. The composite material of claim 10, characterized in that the film (2) is permeable to water vapor through the process of chemisorption.

~~12. The composite material of claim 10, characterized in that the film (2) has micropores for admitting water vapor.~~

13. The composite material of claim 12, characterized in that the micropores have a diameter of 0.2 to 10 μm .

14. The composite material of ~~one of the foregoing~~
claims¹, characterized in that at least the film layer (2) has
macropores in at least some portions.

15. The composite material of claim 14, characterized in that the staple fiber and microfiber composite also has macropores, in such a way that macropores of the staple fiber/microfiber composite and macropores of the film layer (2) form openings that extend through the composite material.

16. ~~Use of a composite material of one or more of the foregoing claims as a liquid-retaining layer in a disposable hygiene article.~~

17. The use of claim 16, characterized in that the hygiene article is a diaper, training pants, a sanitary napkin, a panty liner, or an incontinence shield.

18. ~~The use of claim 16 or 17,~~ characterized in that the composite material is used as a backing sheet.

19. The use of claim 18, characterized in that the microfiber layer (6) is disposed on the outside of the backing sheet.

20. A method for producing the composite material of

~~one of claims 1 through 15, characterized by the following method steps:~~

- 5 - forming a staple fiber layer (4) with an open surface structure
- 10 - applying microfibers (6) to the staple fiber layer (4)
- 15 - solidifying the microfiber/staple fiber layer formed by the action of pressure and a temperature that is above the softening point of the microfibers and/or of the staple fibers
- 20 - applying a prefabricated film (2) on the staple fiber side to the thus prefabricated microfiber/staple fiber composite
- 25 - solidifying the microfiber/staple fiber composite with the foil by the action of pressure and a temperature that is above the softening point of at least the film.

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22. A method for producing the composite material of ~~one of claims 1 through 15, characterized by the following method steps:~~

- a
- 5 - forming a staple fiber layer (2) with an open surface structure
- 10 - applying microfibers (6) to the staple fiber layer
- 15 - solidifying the microfiber/staple fiber layer formed by the action of pressure and a temperature that is above the

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softening point of the microfibers and/or of the staple
fibers

- direct extrusion of a film (2) on the staple fiber side onto the microfiber/staple fiber composite thus formed
- solidifying the microfiber/staple fiber composite

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